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(54) Title: FLUID FLOW BALANCING SYSTEM

**A2** (57) **Abstract:** The present invention provides an apparatus for controlling a system which includes a fluid conduit network and at least two motors each drivingly engaged with different fluid movement devices, the apparatus comprising means for providing a speed signal representative of the speed of each motor and means for providing a control signal in response to the speed of each motor. The apparatus also comprises a means for controlling the speed of each motor in response to the control signal wherein each motor speed is controlled for balancing the rate of fluid movement at an input point and an exit point of the system. A system is also provided under the present invention for balancing the rate of fluid movement, wherein the system comprises at least two motors, each in driving relationship with a respective fluid movement device, means for providing speed signals representative of the speed of each motor, a microprocessor, responsive to the speed signal, for generating control signals representative of a set of new speed signals and variable speed motor controls for controlling the motor speeds in response to the control signals. A method for controlling a system is also provided under the present invention which includes a fluid conduit network and at least two motors each drivingly engaged with different fluid movement devices, the method comprising the steps of a) sensing the speed signal representative of the speed of each motor in the system, b) generating, by the use of a microprocessor, control signals representing new desired speeds for each motor and c) transmitting a command to each motor in response to the control signals, the command adjusting the motor speeds thereby balancing the rate of fluid movement at an input point and an exit point of the system.

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